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10/654,567	08/29/2003	Steven J. Eck	01-05	5069
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DAYCO PRODUCTS, LLC 1 PRESTIGE PLACE MIAMISBURG, OH 45342			EXAMINER CHARLES, MARCUS	
			ART UNIT	PAPER NUMBER
			3682	

DATE MAILED: 05/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/654,567

**Applicant(s)**

ECK, STEVEN J.

**Examiner**

Marcus Charles

**Art Unit**

3682

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 21 February 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,3-9,13-17 and 19-31 is/are pending in the application.
- 4a) Of the above claim(s) 24-26 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3-9,13-17,19-23 and 27-31 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

This action is responsive to the amendment filed 02-21-2006, which has been entered.

Claims 1, 3-8, 13-17, 19-31 are currently pending.

#### ***Claim Objections***

1. Claim 29 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 29 recites the tubular bearing insert carrier is coated with zinc or brass and claim 23 recites the outer circumferential surface of the insert is coated with zinc or brass, which is narrower than claim 29.

#### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 4-7, 23 and 27-31 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In claim 4, the claim recites the group consisting polyamide and polyphthalamide. However, polyphthalamide is not included in the limitations of claim 3.

In claim 23, the claim includes the limitations of the adhesion promoter in lines 6-7 and is further repeated in lines 12-13. Therefore, it is not clear as to why this repetition is made. In claim 30, there exist a double inclusion in "a bearing member having an

Art Unit: 3682

outer bearing race". In claim 31, the claim also repeats the recitation of the "adhesion promoter".

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1, 19 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over McCutchan, Jr. (4,468,210) in view of Avery (1,560,524). McCutchan, Jr. discloses a pulley having a body (80), and a bearing carrier insert (86) forming a central hub which has inner and outer circumferential surfaces, and housing a bearing member (85), and the outer race of the bearing is circumferentially adjacent the inner circumferential surface of the bearing. McCutchan, Jr. also discloses the coated section between the insert and the polymeric body to assist in the bonding of the polymeric body to the pulley. McCutchan, Jr. fails to disclose the coating comprises zinc that is fixedly adhere to the insert. Avery discloses a pulley (see fig. 1) comprising a polymeric body (28) an metal part and a zinc alloy coating (20) between the polymeric body and the metal part such that the polymeric body is molded to the zinc alloy coating in order to achieve great friction co-action and reduce rust between the rubber material and the metallic body. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the device of McCutchan, Jr. so that the coating is

zinc in view of Avery in order to achieve great friction co-action and reduce rust between the rubber material and the metallic body.

In claim 22, McCutchan, Jr. discloses the knurled section (30).

6. Claims 1-5, 8, 13-14, 15-17 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Speer (4,366,609) in view of Avery (1,560,524). Speer (4,366,609) discloses an idler pulley comprising a moldable polymeric body (24), with a belt receiving peripheral shaped surface (20); a tubular insert (12) manufactured from a rigid metal, the insert forming a central hub along the perpendicular axis of the pulley body, the hub having an inner circumferential surface and an outer circumferential surface, the surface of the insert is coated by being roughened or by sandblasting. Speer does not disclose the coated surface is coated with brass or zinc. Avery discloses a pulley (see fig. 1) comprising a polymeric body (28) an metal part and an zinc alloy coating (20) between the polymeric body and the metal part such that the polymeric body is molded to the zinc alloy coating in order to achieve great friction co-action and reduce rust between the rubber material and the metallic body. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the device of Speer so that the coating is zinc in view of Avery in order to achieve great friction co-action and reduce rust between the rubber material and the metallic body.

In claim 3, Speer discloses the pulley body is manufactured from a moldable polymeric material, which is phenolic resin.

In claims 4-5, Speer discloses the polymeric can be a polyamide (col.2, lines 34-55).

In claims 13-14, note the metal coating (18). The metal is coated before being formed in an aluminum sleeve (46).

In claim 15-17, Speers discloses the claimed invention (see col. 2, lines 56-67).

In claim 22, note Speers clearly discloses the locking portion (26).

7. Claims 6-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Speer in view Avery as applied to claim 1 above, and further in view of JP (02-202928). Speers fails to disclose the type of polyamide is nylon. It is well now in the art that nylon is an organic base in polyamide that produces high resistance to temperature and good resistant to abrasion. JP (02-202928) discloses that polyamides such as nylon 6, and nylon 12 are suitable because of their high melting point and highly crystalline structure. Therefore, it would have been obvious to one of ordinary skill in the art to further modify the body of Speer so as to use a polyamide consisting of the group including nylon 6 or nylon 12 in view of JP (02-202928) in order to produce high temperature resistance and good resistant to abrasion.

8. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Speer in view Avery as applied to claim 1 and further in view of FR (1,595,346). Speer discloses the use of high-density polyethylene (col. 2, lines 51-55), the use of fibrous glass (col. 2, lines 54-55), which is glass fiber but fails disclose an adhesion promoter is selected from a group consisting of Talc or mica. FR (1,595,346) discloses that it is known in the art to use Talc or mica as reinforcing adhesion promoters in moldable plastics to increase strength and produce good abrasion. Therefore, it would have been obvious to one ordinary skill in the art at the time of the invention to use talc or mica as an

Art Unit: 3682

adhesion promoter in the moldable plastic of Speer as disclosed by FR (1,595,346) so as to increase strength and produce good abrasion.

9. Claims 20-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over McCutchan, Jr. in view Avery as applied to claim 1 above, and further in view of Hoffmann et al. (4,046,432). McCutchan, Jr. discloses the claimed invention except for the hub including means for locating the bearing member during assembly. Hoffmann et al. discloses a bearing member (23) fitted within a central hub, wherein the hub includes a location means (37/47/57), which is a detente and is allowed to lock the rotational movement of the bearing, retaining relative axial movement and to facilitate proper alignment between the bearing in the hub. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to further modify the pulley of Speer so as to include a location means in view of Hoffmann et al. in order to lock the rotational movement of the bearing, retaining axial movement and to facilitate proper alignment of the bearing in the hub.

10. Claim 23 as understood, is rejected under 35 U.S.C. 103(a) as being unpatentable over Speer in view of Avery, Hoffmann et al. and McCutchan, Jr. and Arai (5,797,819). Speer discloses the claimed invention as in paragraph 3 above, but fails to disclose the zinc coating. Avery discloses a pulley (see fig. 1) comprising a polymeric body (28) an metal part and an zinc alloy coating (20) between the polymeric body and the metal part such that the polymeric body is molded to the zinc alloy coating in order to achieve great friction co-action and reduce rust between the rubber material and the metallic body. Therefore, it would have been obvious to one of ordinary skill in the art at

Art Unit: 3682

the time of the invention to modify the device of Speer so that the coating is zinc in view of Avery in order to achieve great friction co-action and reduce rust between the rubber material and the metallic body. In addition, Speer does not disclose one or more bearing members locating means and a bearing member fitted in the hub. Hoffmann discloses the bearing member locating means as in paragraph 9 above. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the pulley of Speer so as to include a location means in view of Hoffmann et al. in order to lock the rotational movement of a bearing, retaining axial movement and to facilitate proper alignment of the bearing in the hub. In addition, Speer fails to disclose the bearing member. McCutchan, Jr. discloses the bearing member fitting in the hub as in paragraph 5 above. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to fit a bearing member in the hub of Speer as disclose in order to reduce friction. Furthermore, Speer fails to disclose the body containing silica. Arai discloses a pulley body containing silica. It is well known in the art that the inclusion of silica increases strength and wear resistance in order to increase strength without compromising the size and weight. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to include silica to the body of the device of Speer in view o Arai in order to increase strength without compromising the size and weight.

In claim 28, Speer discloses the claimed invention.

In claim 29, Avery discloses the claimed invention as in paragraphs 5-6 above.

In claim 30, McCutchan, Avery and Hoffmann et al., Jr. discloses the bearing



Art Unit: 3682

member as in paragraphs 5 and 9 above.

11. Claim 27 as understood, is rejected under 35 U.S.C. 103(a) as being unpatentable over Speer in view of Avery, Hoffmann and McCutchan, Jr. and Arai (5,797,819) as applied to claim 23 above, and further in view of JP (02-202928). Speers fails to disclose the type of polyamide is nylon. It is well now in the art that nylon is an organic base in polyamide that produces high resistance to temperature and good resistant to abrasion. JP (02-202928) discloses that polyamides such as nylon 6, and nylon 12 are suitable because of their high melting point and highly crystalline structure, Therefore, it would have been obvious to one of ordinary skill in the art to further modify the body of Speer so as to use a polyamide consisting of the group including nylon 6 or nylon 12 in view of JP (02-202928) in order to produce high temperature resistance, good resistant to abrasion.

12. Claim 31 as understood, is rejected under 35 U.S.C. 103(a) as being unpatentable over Speer in view of Avery, Hoffmann and McCutchan, Jr. and Arai (5,797,819). as applied to claim 23 above, and further in view of FR (1,595,346). Speer discloses the use of high-density polyethylene; the use of fibrous glass, which is glass fiber (see paragraph 8 above) but fails disclose that one of the modifier, filler, and reinforcing agent and adhesion promoter is of a group consisting of Talc or mica. FR (1,595,346) discloses that it is known in the art to use Talc or mica as reinforcing filler in moldable plastics so as to increase strength and produce good abrasion. Therefore, it would have been obvious to one ordinary skill in the art at the time of the invention to

use talc or mica as a reinforcing agent in the moldable plastic of Speer as disclosed by FR (1,595,346) so as to increase strength and produce good abrasion.


***Response to Arguments***

13. Applicant's arguments filed 02-21-2006 have been fully considered but they are not persuasive. Applicant's arguments with respect to the prior rejected claims have been considered but are moot in view of the new ground(s) of rejection.

14. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marcus Charles whose telephone number is (571) 272-7101. The examiner can normally be reached on Monday-Thursday 7:30 am to 6:00 pm.

  
**MARCUS CHARLES**  
**PRIMARY EXAMINER**  
April 29, 2006  
AU: 3682